

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION

Box: AF

OF: VON DEYN ET AL.

GROUP ART UNIT: 1626

SERIAL NO. 09/091,300

EXAMINER:
ROBERT GERSTL

FILED: JUNE 16, 1998

FOR: 3-HETEROCYCLYL-SUBSTITUTED BENZOYL DERIVATIVES

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231, on:

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Honorable Commissioner of
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SUPPLEMENTAL AMENDMENT UNDER 37 C.F.R. §1.116

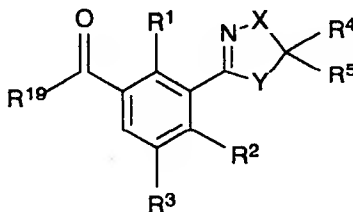
Sir:

In further response to the Office Action of December 07, 1999, and as agreed with Examiner Gerstl during the interview on August 03, 2000, kindly enter and consider the following, supplemental amendment:

IN THE CLAIMS:

Amend Claim 18 to read as follows:

18. (four times amended) A 3-heterocyclyl-substituted benzoic acid compound of the formula III,



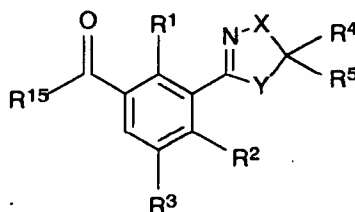
III

where

- R¹⁹ is hydroxyl or a radical which can be removed by hydrolysis,
 R¹ is [nitro,] [C₁-C₆-alkyl] C₁-C₂-alkyl, [C₁-C₆-haloalkyl, C₁-C₆-alkoxy,] methoxy [C₁-C₆-alkylsulfonyl] or methylsulfonyl [C₁-C₆-haloalkylsulfonyl];
 R² is nitro, halogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl or C₁-C₆-haloalkylsulfonyl;
 R³ is hydrogen, halogen or C₁-C₆-alkyl;
 R⁴[, R⁵ are] is hydrogen or methyl, and R⁵ is hydrogen;
 X is O;
 Y is CR¹³R¹⁴;
 R¹³, R¹⁴ are hydrogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxycarbonyl, C₁-C₄-haloalkoxycarbonyl or CONR⁷R⁸;
 R⁷ is hydrogen or C₁-C₄-alkyl;
 R⁸ is C₁-C₄-alkyl.

Amend Claim 28 to read as follows:

28. (twice amended) A 3-heterocyclyl-substituted benzoyl compound of the formula I



wherein

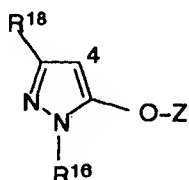
- X is O;
 R¹ is [nitro,] [C₁-C₆-alkyl] C₁-C₂-alkyl, [C₁-C₆-alkoxy,] methoxy [C₁-C₆-haloalkyl, C₁-C₆-alkylsulfonyl] or methylsulfonyl [C₁-C₆-haloalkylsulfonyl];
 R² is nitro, halogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl or C₁-C₆-haloalkylsulfonyl;
 R³ is hydrogen, halogen or C₁-C₆-alkyl;
 R⁴[, R⁵ are] is hydrogen or methyl, and R⁵ is hydrogen;
 Y is CR¹³R¹⁴;

R¹³, R¹⁴ are hydrogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-haloalkoxycarbonyl or CONR⁷R⁸;

R⁷ is hydrogen or C₁-C₄-alkyl;

R⁸ is C₁-C₄-alkyl;

R¹⁵ is a pyrazole of the formula II which is linked in the 4-position



wherein

R¹⁶ is C₁-C₆-alkyl;

Z is H; and

R¹⁸ is hydrogen or methyl.

Kindly enter new Claims 35 to 46 as follows:

35. The 3-heterocyclyl-substituted benzoyl compound of the formula I defined in claim 28, wherein R⁴ denotes hydrogen.
36. The 3-heterocyclyl-substituted benzoyl compound of the formula I defined in claim 28, wherein R¹ is methyl.
37. The 3-heterocyclyl-substituted benzoyl compound of the formula I defined in claim 35, wherein R¹ is methyl.
38. The 3-heterocyclyl-substituted benzoyl compound of the formula I defined in claim 35, wherein R¹ is methyl, R² is methylsulfonyl, R³ is hydrogen, R¹⁶ is ethyl and R¹⁸ is hydrogen.
39. The 3-heterocyclyl-substituted benzoyl compound of the formula I defined in claim 35, wherein R¹ is methyl, R² is methylsulfonyl, R³ is hydrogen, R¹⁶ is methyl and R¹⁸ is methyl.
40. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 18, wherein R⁴ denotes hydrogen.
41. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 18, wherein R¹ is methyl.
42. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 40, wherein R¹ is methyl.

43. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 20, wherein R^4 denotes hydrogen.
44. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 20, wherein R^1 is methyl.
45. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 43, wherein R^1 is methyl.
46. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 45, wherein R^2 is methylsulfonyl and R^3 is hydrogen.

R E M A R K S

Applicants and their representative wish to thank Examiner Gerstl for his courtesy extended to applicants' representatives during the interview on August 03, 2000. The Examiner's assistance in solving the issues in the present application and in granting applicants' representatives the opportunity to personally discuss those issues at short notice is greatly appreciated.

Applicants herewith submit a supplemental amendment wherein Claims 18 and 28 have been amended in accordance with the amendment of Claim 28 discussed during the interview. Additionally, applicants have added new Claims 35 to 46 which are drawn to particular embodiments of the compounds defined in Claims 18 and 28. Claims 35 to 37 are drawn to those compounds (I) of Claim 28 wherein R^4 is hydrogen and R^1 is methyl, respectively. New Claims 38 and 39 correspond to Claims 31 and 34 with the difference that the newly added claims depend from Claim 35 rather than Claim 28. Claims 40 to 44 relate to those compounds (III) of Claim 18 and Claim 20 wherein R^4 is hydrogen and R^1 is methyl, respectively. New Claims 45 and 46 further specify the compounds (III) of Claim 43 in correspondence with the limitation of Claims 36 and 34. No new matter has been added. In accordance with the foregoing, Claims 17, 18, 20 to 23, 28 to 31 and 34 to 46 are now pending in this case. A clean and unmarked copy of those claims is appended to this paper for the Examiner's convenience.

Serial No. 09/091,300

Von DEYN et al.

OZ 0050/47679-He

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11.0345. Please credit any excess fees to such deposit account.

Attached is a check in the amount of \$54.00 to cover the required fee for three claims in excess of 20.

Respectfully submitted,

KEIL & WEINKAUF



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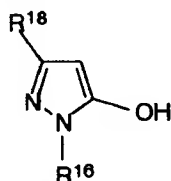
Encl.: THE PENDING CLAIMS

HBK/BAS

A P P E N D I X:

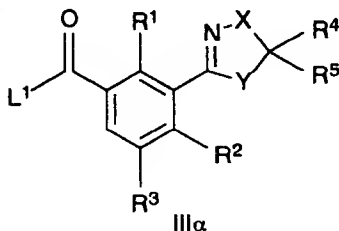
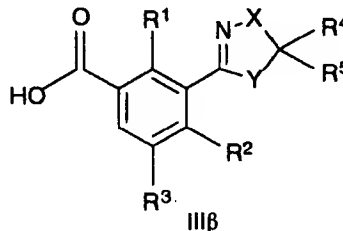
THE ACTIVE CLAIMS:

17. (trice amended) A process for the preparation of the 3-heterocycl-substituted benzoyl compound of the formula I defined in claim 28, which comprises acylating a pyrazole of the formula II



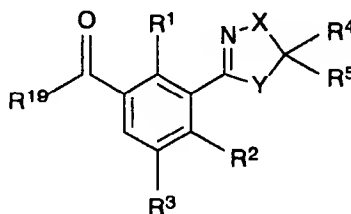
II

with an activated carboxylic acid III α or with a carboxylic acid III β

III α III β

where L¹ is a nucleophilically displaceable leaving group and subjecting the acylation product to a rearrangement reaction to give the compound I.

18. (four times amended) A 3-heterocycl-substituted benzoic acid compound of the formula III,



III

where

R¹⁹ is hydroxyl or a radical which can be removed by hydrolysis,

R¹ is C₁-C₂-alkyl, methoxy or methylsulfonyl;

R² is nitro, halogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl or C₁-C₆-haloalkylsulfonyl;

R³ is hydrogen, halogen or C₁-C₆-alkyl;

R⁴ is hydrogen or methyl, and R⁵ is hydrogen;

X is O;

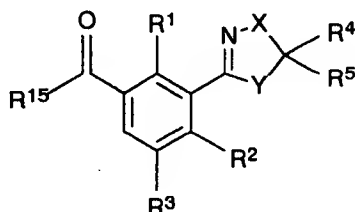
Y is CR¹³R¹⁴;

R¹³, R¹⁴ are hydrogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-haloalkoxycarbonyl or CONR⁷R⁸;

R⁷ is hydrogen or C₁-C₄-alkyl;

R⁸ is C₁-C₄-alkyl.

20. (*trice amended*) The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 18, where R¹⁹ is halogen, hydroxyl or C₁-C₆-alkoxy.
21. (*trice amended*) A composition comprising a herbicidally active amount of at least one 3-heterocyclyl-substituted benzoyl compound of the formula I or of the agriculturally useful salt of I defined in claim 28, and auxiliaries conventionally used for the formulation of crop protection products.
22. (*twice amended*) A process for the preparation of the composition defined in claim 21, which comprises mixing a herbicidally active amount of at least one 3-heterocyclyl-substituted benzoyl compound of the formula I or of the agriculturally useful salt of I and auxiliaries conventionally used for the formulation of crop protection products.
23. (*trice amended*) A method of controlling undesirable vegetation, which comprises allowing a herbicidally active amount of at least one 3-heterocyclyl-substituted benzoyl compound of the formula I or of the agriculturally useful salt of I defined in claim 28 to act on plants, their environment and/or on seeds.
28. (*twice amended*) A 3-heterocyclyl-substituted benzoyl compound of the formula I

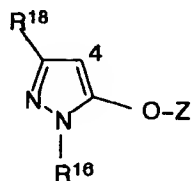


wherein

X is O;

R¹ is C₁-C₂-alkyl, methoxy or methylsulfonyl;

- R² is nitro, halogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkylthio, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl or C₁-C₆-haloalkylsulfonyl;
- R³ is hydrogen, halogen or C₁-C₆-alkyl;
- R⁴ is hydrogen or methyl, and R⁵ is hydrogen;
- Y is CR¹³R¹⁴;
- R¹³, R¹⁴ are hydrogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-haloalkoxycarbonyl or CONR⁷R⁸;
- R⁷ is hydrogen or C₁-C₄-alkyl;
- R⁸ is C₁-C₄-alkyl;
- R¹⁵ is a pyrazole of the formula II which is linked in the 4-position



wherein

R¹⁶ is C₁-C₆-alkyl;

Z is H; and

R¹⁸ is hydrogen or methyl.

29. (amended) The 3-heterocycl-yl-substituted benzoyl compound of the formula I defined in claim 28, wherein R¹ is methyl, R² is methylsulfonyl, R³ is hydrogen, R¹⁶ is methyl and R¹⁸ is hydrogen.
30. 4-[2-Methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole.
31. (amended) The 3-heterocycl-yl-substituted benzoyl compound of the formula I defined in claim 28, wherein R¹ is methyl, R² is methylsulfonyl, R³ is hydrogen, R¹⁶ is ethyl and R¹⁸ is hydrogen.
34. (amended) The 3-heterocycl-yl-substituted benzoyl compound of the formula I defined in claim 28, wherein R¹ is methyl, R² is methylsulfonyl, R³ is hydrogen, R¹⁶ is methyl and R¹⁸ is methyl.
35. The 3-heterocycl-yl-substituted benzoyl compound of the formula I defined in claim 28, wherein R⁴ denotes hydrogen.
36. The 3-heterocycl-yl-substituted benzoyl compound of the formula I defined in claim 28, wherein R¹ is methyl.

37. The 3-heterocyclyl-substituted benzoyl compound of the formula I defined in claim 35, wherein R^1 is methyl.
38. The 3-heterocyclyl-substituted benzoyl compound of the formula I defined in claim 35, wherein R^1 is methyl, R^2 is methylsulfonyl, R^3 is hydrogen, R^{16} is ethyl and R^{18} is hydrogen.
39. The 3-heterocyclyl-substituted benzoyl compound of the formula I defined in claim 35, wherein R^1 is methyl, R^2 is methylsulfonyl, R^3 is hydrogen, R^{16} is methyl and R^{18} is methyl.
40. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 18, wherein R^4 denotes hydrogen.
41. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 18, wherein R^1 is methyl.
42. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 40, wherein R^1 is methyl.
43. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 20, wherein R^4 denotes hydrogen.
44. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 20, wherein R^1 is methyl.
45. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 43, wherein R^1 is methyl.
46. The 3-heterocyclyl-substituted benzoic acid compound of the formula III defined in claim 45, wherein R^2 is methylsulfonyl and R^3 is hydrogen.